(3)

DATA EVALUATION RECORD

1. CHEMICAL: α-butyl-α-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile

SHAUGHNESSY NUMBER 128857

2. TEST MATERIAL:

RH-53,866, Lot LSPL 83/0017E, 84.5% a.i.

3. STUDY IDENTIFICATION:

McAllister, W.A., 1984. Acute Toxicity of RH 53,866 to Rainbow Trout (Salmo gairdneri). Analytical Bio-chemistry Laboratories, Inc., P.O. Box 1097, Columbia, Missouri. EPA EUP Nos. 707-EUP-RNL and 707-EUP-RNU, Acc. No. 072894

4. STUDY TYPE:

Acute Toxicity Test for Freshwater Fish

5. REVIEWED BY:

Robert W. Pilsucki
Microbiologist
Ecological Effects Branch/HED

1/2/85

6. APPROVED BY:

for Raymond Matheny
Head, Review Section 1

7. REPORTED CONCLUSIONS:

The 96-hour LC_{50} for rainbow trout of RH-53,866 was 4.2 (95% C.L. = 3.2-5.6) mg/L.
NOEC = 1.8 mg/L

8. REVIEWER S CONCLUSIONS:

This study is scientifically sound and with an LC_{50} of 4.2 RH-3866 is moderately toxic to rainbow trout. This study fulfills the requirement for an acute toxicity test for coldwater fish.

9. MATERIALS AND METHODS:

Species: Rainbow trout (Salmo gairdneri)

Fish weight: $\bar{X} = 0.66 \pm 0.090$

Fish holding period:

Fish were observed for at least 14 days in culture tanks where they were fed commercial fish food. Fish were acclimated to the dilution water at 12°C for at least 48 hours.

Fish source:

Spring Creek Trout Hatchery
Lewiston, Montana

Food withholding: At least 48 hours

Test vessel:

Size/Volume: The test vessels were 5-gallon size and contained 15 liters of water.

Construction: Glass

Loading: 0.44 g/L (Calculated by this reviewer based on 10 fish per vessel)

Test water:

Temperature: 12 ± 1°C

Water source and chemistry: Soft, reconstituted water (containing $NaHCO_3$, 48 mg; $CaSO_4.2H_2O$, 30 mg; $MgSO_4$, 30 mg; KCl, 2 mg per liter deionized water) was used and had the following parameters: hardness, 40-45 mg/L as $CaCo_3$; alkalinity, 30-35 mg/L as $CaCO_3$; conductivity, 700 umho/cm; D.O., 9.2-10.2 ppm; pH, 7.8-8.3.

The dilution water was also analyzed for organo-phosphorous pesticides, organo-chlorine pesticides and PCB s (see attached tables).

Aeration: None

D.O. During the test, the dissolved oxygen measurements were (mg/L):

Time (hr)	Control	Low Concentration	High* Concentration
0	9.4	9.3	9.4 (10)
48	8.0	8.1	8.6 (5.6)
96	8.5	8.3	8.3 (3.2)

*Number in parentheses indicates concentration in mg/L at which D.O was measured.

pH: During the test, the pH measurements were:

Time (hr)	Control	Low Concentration	High* Concentration
0	7.2	7.3	7.3 (10)
48	7.0	7.1	7.1 (5.1)
96	7.2	7.3	7.3 (3.2)

*Number in parentheses indicates concentration in mg/L at which pH was measured.

Solvent: Acetone. The maximum amount of solvent did not exceed 0.5 ml/L.

Controls: Negative, solvent, and positive were run concurrently with the test material. Both negative and solvent controls showed no mortality.

Number of fish/concentration: 10

Concentrations - mortalities:

Acute LC_{50} Rainbow trout

Concentration[a] (mg/L)	Number Exposed	Number Dead	Percent Mortality
10	10	10	100
5.6	10	10	100
3.2	10	0	0
1.8	10	0	0
1.0	10	0	0

[a]Dose adjusted to reflect 100% a.i.

Toxic symptoms:

Toxic symptoms prior to death at 5.6 mg/L were loss of equilibrium and distended abdomens. At 3.2 mg/L, the fish exhibited loss of equilibrium,

surfacing and dark coloration. There were no toxic symptoms at 1.8 and 1.0 mg/L.

10. STATISTICAL ANALYSIS:

The LC_{50} and 95% confidence limits were calculated by the computerized method of Stephan et al.

11. DISCUSSION: There was no Discussion section in this study.

12. REVIEWER S EVALUATION:

Test procedure: The test procedures generally follow EPA s guidelines for an acute toxicity study for coldwater fish.

Statistical analysis: EEB verification of the results showed that neither the moving average nor the probit method could give a statistically sound LC_{50}. The LC_{50} determined by the binominal test was 4.2 (95% C.L. = 3.2 and 5.6) mg/L.

Discussion: The conclusions reached in this study generally coincide with those attained by EEB. This study indicates that RH-3866 is moderately toxic to coldwater fish under these conditions.

13. CONCLUSIONS:

Category: Core

Rationale: This study follows EPA s guidelines for an acute toxicity test for freshwater fish.

Repairability: N/A

PILSUCKI RH-3866 ACUTE TOXICITY FOR FRESHWATER FISH - Rainbow trout
****

CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(PERCENT)
10	10	10	100	.0976563
5.6	10	10	100	.0976563
3.2	10	0	0	.0976563
1.8	10	0	0	.0976563
1	10	0	0	.0976563

THE BINOMIAL TEST SHOWS THAT 3.2 AND 5.6 CAN BE
USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT
CONFIDENCE LIMITS, BECAUSE THE ACTUAL CONFIDENCE LEVEL
ASSOCIATED WITH THESE LIMITS IS GREATER THAN 95 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 4.2332

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE
PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE
NOR THE PROBIT METHOD CAN GIVE ANY STATISTICALLY SOUND RESULTS.

****

MYCLOBUTANIL 128857

Page_____ is not included in this copy.

Pages 6 through 7 are not included.

The material not included contains the following type of information:

____ Identity of product inert ingredients.

____ Identity of product impurities.

____ Description of the product manufacturing process.

____ Description of quality control procedures.

____ Identity of the source of product ingredients.

____ Sales or other commercial/financial information.

____ A draft product label.

____ The product confidential statement of formula.

____ Information about a pending registration action.

X FIFRA registration data.

____ The document is a duplicate of page(s) _____.

____ The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.